think, but is the natural cycle of life. In most plants, sunlight is absorbed by chloroplasts, which use its energy to transform carbon dioxide into complex carbon compounds, which enable the plant to grow and reproduce. This is also a positive feedback process. It is the essence of life. But ecology (as I know it) is about something different. It deals with the world within which an organism exists, which determines how much space and food is available, and what other organisms are present that want to eat it or to eat its food. It is what prevents innate positive feedback from continuing forever, what the organism would like to do but cannot. It is what keeps the organism within bounds, what regulates its numbers. It is the substance of ecology. Strangely, Ulanowicz seems little concerned with this process. He is interested, mainly, in the flow of energy. Like most other ecologists, however, I am not really concerned with the energetics of the problem. I am more interested in the *numbers* of individual organisms that interact with each other in a given area, what keeps them roughly at a constant density (despite their propensity for growth), and why certain species occasionally burst into outbreaks. I know that energy from the sun is the thing that makes existence possible, and that when it disappears (as it undoubtedly will), life will cease. But, in the meantime, we need to understand, as best we can, because we have the means (we think) to do so. It is this innate curiosity that drives us.

ALAN BERRYMAN, *Medical Lake, Washington*

INFECTIOUS DISEASE ECOLOGY: EFFECTS OF ECOSYSTEMS ON DISEASE AND OF DISEASE ON ECOSYSTEMS. *Based on a conference held in Millbrook, New York, May 2005.*

Edited by Richard S. Ostfeld, Felicia Keesing, and Valerie T. Eviner. Princeton (New Jersey): Princeton University Press. $99.50 (hardcover); $45.00 (paper). xiv + 506 p.; ill.; index. ISBN: 978-0-691-12484-1 (hc); 978-0-691-12485-8 (pb). 2008.

Infectious disease ecology is a "hot" field, with many research initiatives and funding programs now focused on the subject. In many ways, it can be seen as the field of ecology opening its eyes and extending its view to the part of the ecological world that is not easily seen. Clearly, these steps have been enabled by molecular tools, which have made many novel insights possible, but just as clearly a new appreciation of the importance of these additional scales and dimensions is at hand. This book, edited by leaders in the subject, represents a serious attempt to summarize the state of the field as of a 2005 conference, held at the Institute of Ecosystem Studies, with contributions from many of the most active personalities in the this area of research.

This volume offers three perspectives on disease ecology. The first, the effects of ecosystems on disease transmission, revolves around the dilution or amplification of disease transmission caused by biodiversity, an important thinking framework proposed by two of the editors of the book, offering useful and balanced perspectives on this issue. The second perspective is the converse—how diseases influence ecosystems and their functioning, clearly facing a more difficult challenge in measuring ecosystem responses. Finally, the Management and Applications section, although more heterogeneous, offers points of view regarding how disease ecology interfaces with public health, education, and decision-making.

Overall, the book is quite strong, and offers useful and thorough overviews, a difference from the usual reworks and overviews that pervade edited volumes—in this sense, the editors are to be congratulated. In a few details, the volume felt overly "ecological"; for instance, in the chapter on vector diversity (by Power and Flecker), the authors neglect actual species composition in favor of functional diversity: a truly comprehensive view would incorporate the full complexity of biodiversity, as well as ecological processes. Finally, the manners in which disease ecology as a field can enrich and educate, or be enriched by and educated by, the long-standing fields of public health and epidemiology felt underdeveloped, in spite of stellar chapters by Johnson, Peters, and Childs, all pillars of the public health dimension. Overall, then, this book is a useful picture of the state of the field, and could be a basis for graduate-level seminars treating the field of disease ecology.

A. TOWNSEND PETERSON, *Natural History Museum & Biodiversity Research Center, University of Kansas, Lawrence, Kansas*

ECOLOGY AND EVOLUTION OF THE GRASS-ENDOPHYTE SYMBIOSIS.

By Gregory P. Cheplick and Stanley H. Faeth. Oxford and New York: Oxford University Press. $75.00. ix + 241 p.; ill.; index. ISBN: 978-0-19-530808-2. 2009.

The authors have produced an excellent textbook on the ecology and evolution of the widespread symbiosis between leaf endophytes, vertically transmitted asexual fungi, and grasses. The volume is well written and thoroughly reviews the pertinent literature. Examples of endophyte's effects on different organization levels and counterexamples for the expected patterns run throughout the text, making this a good synthesis work for graduate students and also for ecologists.

There are at least three reasons for why ecologists should be interested in this book on micro-